UNCRATING/INSTALLATION INSTRUCTIONS

AMSCO® RELIANCE® 430

Single-Chamber Washer/Disinfector

(09/15/00)
Rev. 5

P-122990-172

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A WORD FROM STERIS

Follow each step of the uncrating/installation instructions in the order presented. Open the carton carefully to avoid damage to the equipment inside. If you find any indication of damage to the equipment (no matter how slight), show it to your supervisor.

To properly install this unit, you will need the Equipment Drawings (previously furnished), showing all utility service and space requirements. If drawings cannot be located, replacement copies may be obtained by writing, faxing, or telephoning STERIS, giving the serial and model numbers of your equipment.

Once installed, equipment operation should be tested by a qualified service technician prior to your usage of the equipment.

If STERIS supervision is desired for installing and starting up this equipment, contact your local STERIS representative.

Indications For Use

The Amsco® Reliance® 430 Single-Chamber Washer/Disinfector is indicated for use in the cleaning and low-level disinfection of soiled reusable utensils, trays, glassware, bedpans and urinals, rubber and plastic goods, simple hard-surfaced rigid surgical instruments, such as forceps, and clamps, and other similar and related articles found in health care facilities.

Advisory

STERIS does not intend, recommend nor represent in any way that this Amsco Reliance 430 Single-Chamber Washer/Disinfector be used for the terminal disinfection or sterilization of any regulated medical device. Amsco Reliance 430 Single-Chamber Washer/ Disinfectors are intended only to perform an initial step in the reprocessing of soiled, reusable medical devices. If medical devices will be contacting blood or compromised tissues, such devices must be terminally processed in accordance with good Hospital Practices before each use in human patients.

Service Information

A thorough preventive maintenance program is essential to safe and proper equipment operation. You are encouraged to contact your STERIS reprsentative concerning extended service maintenance agreements to give your washer/disinfector planned maintenance, assuring equipment performance according to factory specifications. STERIS maintains a nationwide staff of well-equipped, factory-trained technicians to provide this service, as well as expert repair services. Please contact your local STERIS representative for service details.

STERIS carries a complete line of accessories for use in this equipment. A STERIS representative will gladly review these with you.

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LISTING OF WARNINGS, CAUTIONS AND SYMBOLS

1

The following is a listing of safety precautions which must be observed when uncrating, installing, and checking this equipment. WARNINGS indicate the potential for danger to personnel and CAUTIONS indicate the potential for damage to equipment. These precautions are repeated (in whole or in part), where applicable, throughout the instructions.

WARNING - LACERATION/EYE INJURY HAZARD:

WHEN REMOVING BANDS, wear eye protection and always use a tool specifically designed to cut the bands. The bands used to secure this container can cause personal injury when cut and tension is released.

WARNING - PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:

WHEN MOVING WASHER/DISINFECTOR, use a forklift. Do not use the doors or door handles for lifting.

TO TILT THE WASHER/DISINFECTOR, more than one person is required. Washer/disinfector weighs approximately 1000 lbs (454 kg).

WARNING - LACERATION HAZARD:

WHEN REMOVING BOLTS, wear gloves to protect your hands.

WARNING - BURN HAZARD:

WHEN CHECKING AUTOMATIC STOP FEATURE, open chamber door slowly and wear gloves and face protection. Hot water/steam may be sprayed through door opening if door is opened while washer is operating.

EXCEPT FOR AN EMERGENCY, do not open door when cycle is in progress. In an emergency, first stop cycle by pressing the STOP touch pad and wait for water flow to stop. Wear protective gloves and face shield whenever reaching into the chamber.

WARNING - FALL HAZARD:

TO PREVENT FALLS, keep floor dry. Promptly clean up any spills or drippage.

WARNING - CHEMICAL BURN HAZARD:

WASHER/DISINFECTOR DETERGENTS ARE CAUSTIC and can cause adverse effects to exposed tissues. Do not get in eyes, on skin or attempt to ingest by mouth.

- Read and follow the precautions and instructions on the detergent label and in the Material Safety Data Sheet (MSDS) prior to handling the detergent, refilling the detergent container or servicing the detergent injection pump and lines.
- Wear protective gloves, face shield and clothing whenever handling the detergent or servicing the detergent injection pump and lines.

WARNING - ELECTRICAL SHOCK HAZARD:

FASTENERS AND STAR WASHERS ARE USED to ensure protective bonding continuity. Always re-install any star washers which may have been removed during installation or servicing.

CAUTION - POSSIBLE EQUIPMENT DAMAGE:

Leave door closed to prevent counterweight from dropping to bottom of guiding box.

CAUTION (Cont'd)

- Once three-phase power is connected, check pump for correct rotation, indicated by arrow on pump motor. Incorrect pump rotation may result in pump damage and improper washing action.
- If unit must be tilted, tilt onto left or right side. Handles and control panels could be damaged if unit is tilted onto front (soiled) or back (clean) side.
- Avoid product damage. Always select a cycle appropriate for the items being processed.
- When choosing detergent, select one with a low chloride content. Detergents with a high chloride content must not be used, as chlorides will harm and deteriorate stainless steel.

IMPORTANT: Be sure to check the Occupational Health and Safety Act, as well as local electric and plumbing codes, for any special requirements that may pertain to installation of this washer/disinfector.

Symbols

Symbol	Definition
	Protective Earth (Ground)
	Warning! Risk of Electrical Shock
	Electrostatic Sensitive Device
	This Way Up
	Do Not Stack
	Fragile
	Keep Dry
A	Amperage Rating of the Unit
V	Voltage Rating of the Unit
~	Alternating Current
kW	Power Rating of the Unit
Hz	Frequency of the Unit
ϕ	Phase of the Unit

Open the Crate

⚠ WARNING - PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: When moving washer/ disinfector, use a forklift. Do not use doors or door handles for lifting.

⚠ WARNING - LACERATION/EYE INJURY HAZARD: When removing bands, wear eye protection and always use a tool specifically designed to cut the bands. The bands used to secure this container can cause personal injury when cut and tension is released.

NOTE: The equipment in this container weighs approximately 1100 lbs (500 kg). Use a forklift to move washer.

NOTE: Uncrate on level floor as close to the installation site as possible.

1. Place crate in position to be opened from the top. Provide a clear work area on all sides (see Figure 2-1).
2. Carefully cut and remove bands from container.
3. Discard bands before continuing.

Remove Crate and Packing

1. Lift off top wooden panels.
2. Remove wooden side panels. Discard top and side panels.
3. Remove foam sheets.
4. Check tip indicator (located inside bottom service compartment, see Figure 2-2). If unit has been tipped, notify the STERIS Regional Office nearest you.

Remove Base and Move Washer/Disinfector

1. Open bottom service compartment and remove the four lag bolts holding washer to shipping base (see Figure 2-2).
2. Using a forklift, lift the washer from base. If washer is too high to be lifted by forklift, proceed to step 6.

⚠ WARNING - LACERATION HAZARD: When removing bolts, wear gloves to protect your hands.

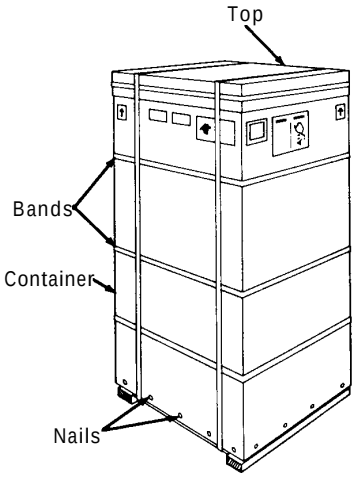


Figure 2-1. Position Crate

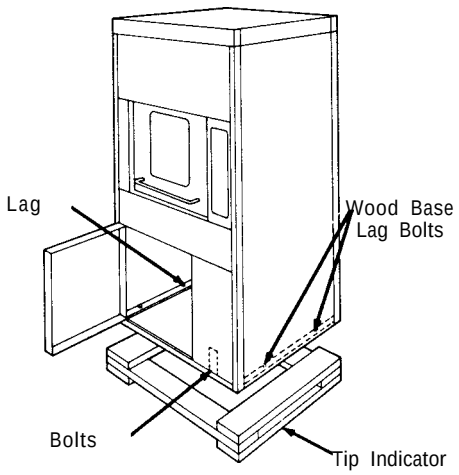


Figure 2-2. Remove Lag Bolts

⚠ WARNING - PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: To tilt the washer/ disinfector, more than one person is required. Washer/ disinfector weighs approximately 1000 lbs (454 kg).

⚠ CAUTION: If unit must be tilted, tilt unit onto left or right side. Handles and control panels could be damaged if unit is tilted onto front (soiled) or back (clean) side.

3. Pull out and discard the wooden base under the washer.
4. Move washer to installation site.
5. Lower the washer.
6. If washer is too high to be lifted by forklift, the washer may be tilted (see Figure 2-3).
   a. Place cardboard or removed foam sheets on skid to protect cabinet.
   b. Slowly tip washer sideways and lower onto skid, being careful to prevent damage.
   c. Move unit by forklift to its permanent site.
   d. Carefully tip unit back to a standing position.

Prepare Washer/ Disinfector for Installation

⚠ CAUTION: Leave door closed to prevent counterweight from dropping to bottom of guiding box.

1. Remove all tape from washer/disinfector.
2. With door closed to prevent counterweight from dropping, remove the door counterweight blocking pin as follows (see Figure 2-4):
   a. Remove bolts holding left (when facing front [soiled] side of unit) side panel to washer.
   b. Remove left side panel.
   c. Remove screw from blocking pin. Keep screw.
   d. Slide blocking pin out of counterweight box.
   e. Once counterweight moves freely, fasten blocking pin onto outside edge of counterweight box, attaching screw previously removed through hole provided for pin storage (see Figure 2-4). Pin may be needed for future door maintenance work.

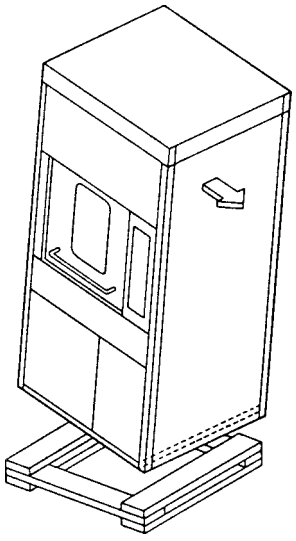


Figure 2-3. Tilt Washer

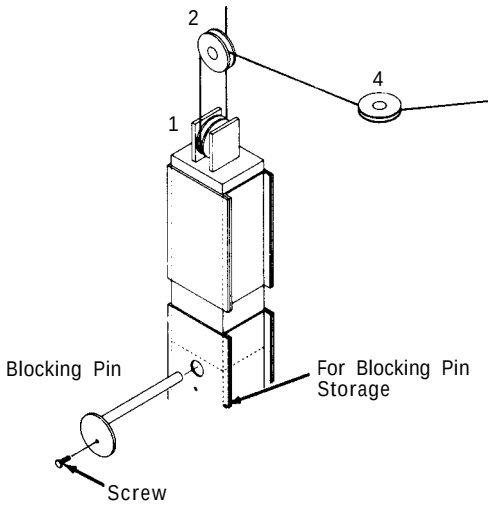


Figure 2-4. Remove Blocking Pin

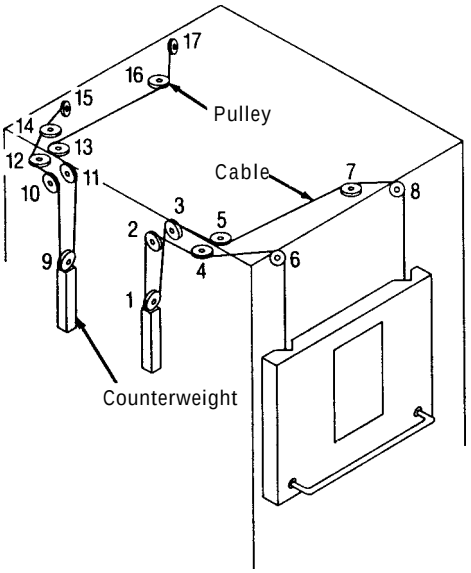


Figure 2-5. Door Cables and Pulleys

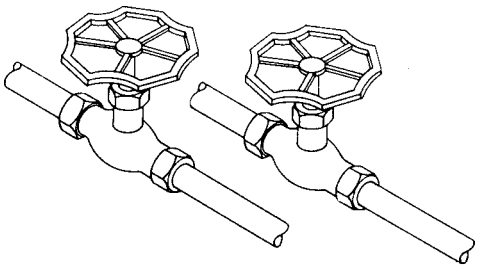
f. Check that cables are seated in the pulley grooves (see Figure 2-5).

g. Replace left side panel.

h. Repeat steps a. through g. for back (clean) side door.

3. Open chamber door. Remove nylon straps holding spray headers to frame.
4. Remove nylon straps holding chamber spray arms.
5. Remove tape holding chamber filter.
6. Remove nylon straps and foam holding steam coils in the tub.
7. Remove tape and foam from pure water tank.
8. Remove all packing and tape from control panel.
9. Remove envelope containing Operator Manual and other printed material. Give to appropriate personnel.

Before Installing Equipment



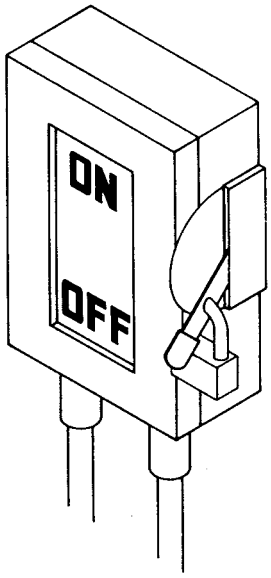


Figure 3-1. Utility Service Connections

1. Review permissible environmental conditions. This washer/disinfector is designed to give optimal results in an environment where maximum relative humidity is 80% for temperatures up to 88°F (31°C) decreasing linearly to 50% relative humidity at 104°F (40°C).

   a. Clearance - Clearance space shown on Equipment Drawing is necessary for easy installation and proper operation and maintenance of washer/disinfector.

   b. Utility service lines:

   - Shutoff valves (not by STERIS) should be installed on steam and water lines to washer/disinfector (see Figure 3-1). Shutoff valves allow washer/disinfector to be serviced without shutting off building supply. Shutoff valves must be capable of being locked in OFF position. Vacuum breakers are also recommended on water lines.
   - Disconnect switches (not by STERIS) should be installed in electric supply lines near washer/disinfector (see Figure 3-1). Disconnect switches should be capable of being locked in OFF position only.
   - If this machine is installed next to other equipment, shutoff valves and disconnect switches should be located so that service can be shut off to one piece of equipment at a time.
   - Utility service requirements are shown on Equipment Drawing. This machine requires either 208 volts, 3 phase, 60 Hz (steam heated) or 480 volts, 3 phase, 60 Hz (electric heated) power. Check Equipment Drawings or name plate for proper voltage.

2. Place washer/disinfector, as shown on Equipment Drawing, in correct relation to building supply lines. If unit is not at installation site, refer to Uncrating Instructions (Section 2) for proper moving instructions.

NOTE: Floor under washer/disinfector should be level. If necessary, adjust leveling legs to level washer/disinfector. If washer/disinfector is not level, water level control may not work properly.

3. Locate access door keys (inside chamber) and open rear access doors.

Connect Utilities

⚠ WARNING - FALL HAZARD: To prevent falls, keep floor dry. Promptly clean up any spills or drippage.

1. COLD WATER - Blow out the building cold-water supply line to remove chips, scale, etc. Connect line to washer/disinfector.
2. HOT WATER - Blow out the building hot-water supply line to remove chips, scale, etc. Connect line to washer/disinfector.
3. STEAM - Blow out the building steam supply line to remove chips, scale, etc. Connect line to washer/disinfector.
4. PURIFIED WATER - Connect supply line to washer/disinfector.

5. WASTE - Connect washer/disinfector drain line to building waste line.
6. VENTILATION - Connect washer/disinfector ventilation to building ventilation, as required.
7. Open building supply valves and check for leaks: correct if necessary.
8. ELECTRIC - Connect building electrical supply to washer/disinfector. Verify tight electrical connections.

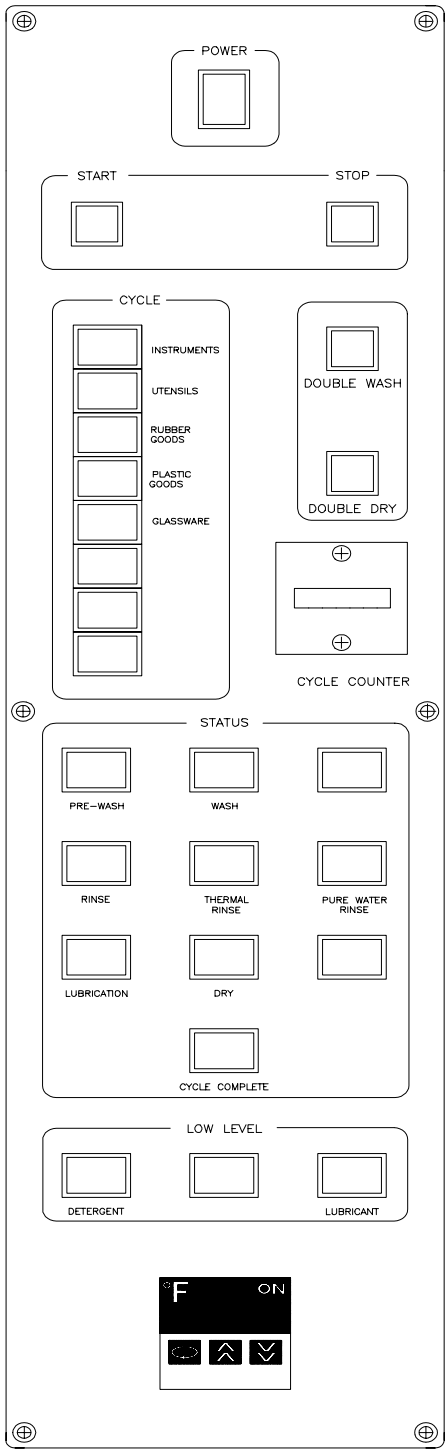


Figure 3-2. Front (Soiled) Side Control Panel

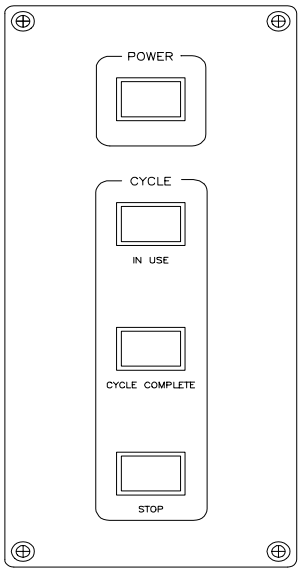


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Figure 3-3. Back (Clean) Side Control Panel

Initial Set-up

NOTE: Before operating the washer/disinfector, an initial set-up test should be conducted by a STERIS Engineering Service technician or equivalent person familiar with the operational test procedures, including leak testing.

1. Open chamber door. Check that filters are positioned in wash chamber bottom.
2. Remove manifold or accessory from chamber.
3. Check that nothing has been left in chamber (tape or tie wraps).
4. Close door and press POWER button. POWER light goes on (see Figures 3-2 and 3-3).
5. Check that purified water storage tank begins to fill as soon as washer/disinfector is turned on. If not, contact a qualified STERIS Engineering Service technician. Check that tank does not overfill.

Initial Set-up Test

IMPORTANT: Do not use any detergent or lubricant for this test.

1. Select desired cycle by pressing the corresponding button (INSTRUMENT, UTENSILS, RUBBER GOODS, PLASTIC GOODS, or GLASSWARE).

NOTE: Washer/Disinfector operation can be halted at any time by pressing STOP, waiting for water flow to stop, and then opening door. Close door and press START to resume cycle. Pump operation will be delayed for 2 minutes after door is closed to avoid chamber pressurization.

2. Press START. Let cycle run to clear piping system of any foreign matter.

CAUTION: Avoid product damage. Always select cycle appropriate for the items being processed.

NOTE: Low detergent and lubricant level lights will glow. Do not add any detergent or lubricant.

NOTE: Phase status lights flash to indicate which phase is running, showing cycle progression (see Figures 3-2 and 3-3, and Table 1).

3. Inspect piping for leaks. If necessary, tighten connections.
4. Check that CYCLE COMPLETE light turns on at end of cycle. When cycle is complete, open door.
5. Remove and clean wash chamber filters. Replace filters in chamber.

WARNING - BURN HAZARD: Except for an emergency, do not open door when cycle is in progress. In an emergency, first stop cycle by pressing the STOP touch pad and wait for water flow to stop. Wear protective gloves and face shield whenever reaching into the chamber.

THIS COMPLETES THE INSTALLATION. Before operating the equipment, an operational test should be conducted by a service technician. Contact your local STERIS sales representative for availability and information on this service. Refer to the Maintenance Manual (P-764327-734) for further details on these procedures.

Table 3-1. Amsco® Reliance® 430 Single-Chamber Washer/Disinfector Cycle Description Chart

	COLD WATER PRE-WASH	DETERGENT WASH	RINSE 1	RINSE 2	PURE WATER RINSE	LUBRICATION	DRY
Fixed Time	2 min.	4-8 min.	30 sec	60 sec			
Temperature	Cold Tap Water	Hot Tap Water Heated to 150°F (66°C)	Hot Tap Water	Hot Tap Water Heated and Maintained at 180°F (82°C) *	Cold Pure Water or 180°F Pure Water	Lubricant Milk is Added to Pure Water	Air Heated and Maintained at 200°F (93°C)
CYCLES							
Instruments	X	X	X	X			
Utensils	X	X	X	X			
Rubber Goods	X	X	X	X			
Plastic Goods	X	X	X	X			
Glassware	X	X	X	X			

X = Applicable

* Selection indicates temperature at which sump water will be maintained. Temperature on items will be approximately 4°F (2°C) lower.

Rev. 4 (2000-05-26)

122-991-634

First Operational Test

WARNING - FALL HAZARD: To prevent falls, keep floor dry. Promptly clean up any spills or drippage.

CAUTION: Avoid product damage. Always select a cycle appropriate for the items being processed.

WARNING - BURN HAZARD: Except for an emergency, do not open door when cycle is in progress. In an emergency, first stop cycle by pressing the STOP touch pad and wait for water flow to stop. Wear protective gloves and face shield whenever reaching into the chamber.

WARNING - BURN HAZARD: When checking automatic stop feature, open chamber door slowly and wear gloves and face protection. Hot water/steam may be sprayed through door opening if door is opened while washer is operating.

CAUTION: Once three-phase power is connected, check pump for correct rotation, indicated by arrow on pump motor. Incorrect pump rotation may result in pump damage and improper washing action.

IMPORTANT: Do not use any detergent or lubricant for this test.

1. Insert a manifold or accessory in chamber. Be sure the accessory is properly positioned over manifold connector.
2. Close chamber door and press POWER button. POWER light goes on.
3. Select desired cycle by pressing corresponding cycle button (see Figure 3-2).

NOTE: Washer/Disinfector operation can be halted at any time by pressing STOP, waiting for water flow to stop, and then opening door. Close door and press START to resume cycle. Pump operation will be delayed for 2 minutes after door is closed to avoid chamber pressurization.

4. Press START button.
5. Observe (through window in door) operation of the spray assemblies. All rotary spray assemblies should rotate freely. If they do not, press STOP, open the door, and clean out spray arm nozzles with a thin piece of wire (see Figure 4-1). Close the door and press START.
6. Check all safety features.
   a. Being careful of hot water escaping, open front (soiled) side chamber door. Safety lock-out feature should shut all service off. Close door and press START to resume cycle.
   b. Open back (clean) side chamber door. Safety lock-out feature should shut all service off. Close door and press START to resume cycle.
7. Check pump rotation. Pump should rotate clockwise (while facing it) as indicated by arrow on pump motor.
8. Check fan rotation. Arrow on fan indicates proper direction.

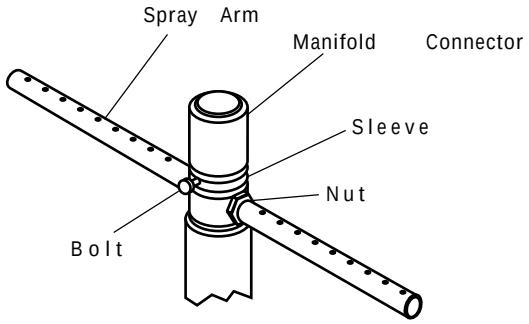

Figure 4-1. Rotary Spray Arms

9. When cycle is over, the CYCLE COMPLETE light comes on. Open door and remove the accessory.
10. Clean chamber filters. Replace filters in chamber and close chamber doors.

Second Operational Test

CAUTION: When choosing detergent, select one with a low chloride content. Detergents with a high chloride content must not be used, as chlorides will harm and deteriorate stainless steel.

WARNING - CHEMICAL BURN HAZARD: Washer/Disinfector detergents are caustic and can cause adverse effects to exposed tissues. Do not get in eyes, on skin or attempt to ingest by mouth. Read and follow the precautions and instructions on the detergent label and in the MSDS prior to handling the detergent or refilling the detergent container. Wear protective gloves, face shield and clothing whenever handling the detergent.

NOTE: Always use a non-foaming detergent for effective cleaning and proper pump and water level control operation.

NOTE: Refer to Section 2 and follow detergent manufacturer's recommendations to determine the temperature of the WASH treatment.

NOTE: Follow detergent manufacturer's recommendations for the amount of detergent used according to water hardness.

1. Open injection pump access door (lower right).
2. Slide injection pump drawer out from under washer/disinfector.
3. Install one-gallon detergent and lubricant containers (see Figure 4-2).
4. Insert squeeze tube into each container.
5. Using the PRIME switch beside each injection pump, fill up tubing between container and pump.
6. Select Instrument cycle by pressing INSTRUMENT button.
7. Press START button.
8. Verify detergent is injected into chamber during Wash phase as soon as chamber begins to fill.

   Check detergent concentration. Pump injection rate is 10 oz/min (284 ml/min). The detergent injection time is preset at 34 seconds. To modify concentration, adjust the appropriate timer located in the injection pump drawer.

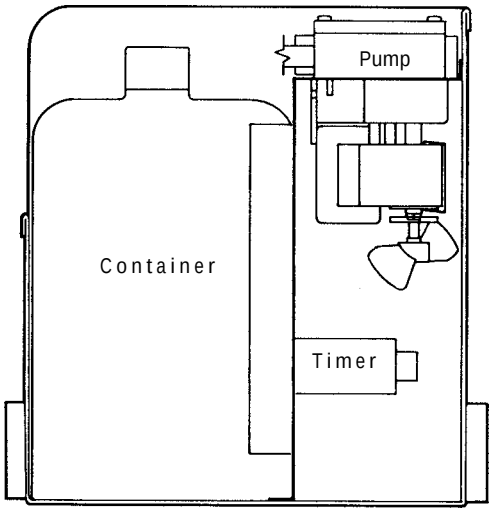

Figure 4-2. Detergent/Lubricant Container in place

9. Verify lubricant is injected into chamber during Lubrication phase as soon as Purified Water Rinse phase is complete.

   Check lubricant concentration. Pump injection rate is 10 oz/min (284 ml/min). The lubricant injection time is preset at 60 seconds. To modify concentration, adjust the appropriate timer located in the injection pump drawer.

10. When cycle is complete, slide injection pump drawer back in place. Close access door.

11. Press the POWER button to turn off the unit. POWER light goes off.

This unit is now ready for a thorough System Field Test, Calibration and a first time Preventive Maintenance Checklist Inspection by a qualified STERIS service representative. Contact your Steris Sales Representative for availability and information on this service. Refer to Maintenance Manual (P-764327-734) for further details on these procedures.

Protect your STERIS equipment with cost-effective extended service agreements

The best way to prevent costly downtime due to equipment malfunction is with regularly scheduled maintenance performed by qualified technicians trained in the latest technology. STERIS offers annual maintenance agreements to give your capital equipment planned maintenance that will help correct little problems before they become big ones. STERIS Engineering Service combines the precise maintenance program and factory-trained technicians to assure you of maximum productivity.

Our STERIS service technicians thoroughly inspect, clean, adjust and provide all necessary maintenance to keep your equipment performing according to factory specifications, all at an established economical rate that you can plan for.

We have more than 5,000 customers who are benefiting from STERIS maintenance agreements. Why not join them? Obtain complete details by calling 1-800-333-8828, or writing to: